

ENVIRONMENTAL HAPPENINGS AT PICATINNY ARSENAL

VOLUME 5, ISSUE 1 WINTER 2007

TIME CRITICAL REMOVAL ACTION AT TILCON

The Time Critical Removal Action (TCRA) at the Tilcon quarry is underway. The TCRA is being implemented by Malcolm Pirnie Inc. as part of the Military Munitions Response Program (MMRP) at Picatinny Arsenal. A portion of the Tilcon quarry is considered to be part of the 1926 Explosion Site which covers a vast area on Picatinny Arsenal and on the adjoining property. The Army embarked

on the TCRA in response to the detection of military explosives constituents (MEC) at Tilcon last fall. The TCRA will involve a visual and geophysical survey of portions of the quarry. As a preliminary phase of the work a "geophysical proveout" was completed to identify buried MEC targets. Photos below and on pages 4, 5, and 6 show the investigation underway.



Personnel completing a surface sweep in an area recently detonated by Tilcon.

POINTS OF INTEREST:

- The next RAB meeting will be held on March 8th at the Hilton Garden Inn in Rockaway, New Jersey from 7:00 to 8:30 pm. Members of the public are invited to attend.
- A public meeting will be held prior to the RAB meeting at 6 pm in the same location at the Hilton Garden Inn. Members of the public are invited. Comments on the Proposed Plan can be provided at the meeting or in writing up until April 8, 2007.
- The next technical project meeting will be held on March 7th. Hosted by ARCADIS, the PBC contractor, the meeting will focus on technical and regulatory issues.

IN THE FIELD.....

Recent field activities for December 2006 and January and February 2007 included the following:

600 Area: Synoptic water level measurement and collection of groundwater samples from several wells near the AWDF bldg.

Collection of sediment samples. Drilling and installation of Well 13MW-10. (December) Completion of borehole geophysical survey on two recently installed boreholes. Packer testing and collection of groundwater samples from 13MW-10 and 13MW-11.

Area D: Completion of continued on page 4

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The
Picatinny Arsenal Environmental Restoration Advisory Board

*Offers A Respectful and Appreciative Tribute
to the memory of the*

Honorable Wesley Ackerson

*who ably served the community in many capacities — consistently contributing much of his time and energy
throughout his long and eventful life to numerous civic activities
devoted to the welfare of his fellow human beings:*



*A combat veteran of the Pacific Campaign of World War II, Wesley was awarded
the*

DISTINGUISHED SERVICE AWARD

*One of the founders of Jefferson Township Fire Co. No. 1 of Milton,
Official municipal representative of Jefferson Township to the
Picatinny Arsenal Environmental Restoration Advisory Board,
Member of the Jefferson Township Historical Society,
Distinguished and long-standing member of the Jefferson Township Rotary Club,
Member of the Masonic Lodge of Dover,
and Community representative to the Jefferson Township Republican County Committee.*

*During his tenure on our board he vigorously represented the community of Jefferson Township. Wesley strove to assert and protect
the rights of his fellow citizens, and to advance the environmental restoration effort at Picatinny Arsenal. He contributed
to the Board so that Picatinny Arsenal can continue to effectively serve to guarantee the national security of
this republic. It was a distinct honor for us to have had the opportunity to serve alongside Wesley.
He was always observed to be a man of dignified and upright bearing. Most assuredly
Wesley will be justly rewarded and esteemed by a higher power.*

Tribute prepared by Michael Glaab

Information provided by Picatinny Arsenal, Mr. Robert Crothers, former Mayor Evelyn Brown, Proofread by Barbara Dolce



TRAINING OPPORTUNITIES

The Interstate Technical
Regulatory Council (ITRC)
had scheduled the following
on-line courses:

- “Real-Time Measurement of
Radionuclides in Soil,” March

6th from 2 to 4:15 pm

- “Vapor Intrusion Pathway:
A Practical Guidance,” March
15th from 11 am to 2:15 pm

- Risk Assessment and Risk

Management: Determination
and Application of Risk-Based
Values,” March 27th from 2 to
4:15 pm

The course is free. Register
on-line at www.itrcweb.org.

EXPANSION TO CHILD CARE CENTER UNDER SCRUTINY

The child development center (CDC) located on the base is going to be expanding. The NJDEP has requested additional sampling and evaluation of the expansion continues. Sampling results and the conclusions based on them will be forthcoming. The last sampling performed at the site was by CHPMM in 1996. At that time exceedances of the NJDEP Soil Cleanup Criteria for beryllium were detected. Since that time the standard for beryllium has

been relaxed. Concerns about vapor intrusion are now more acute because new regulations from the NJDEP have come into

play since the CDC was first constructed. The NJDEP has inquired about vapor issues at other IRP sites. Air sampling was conducted in the past at residences near the Area D groundwater plume. Another site where vapor intrusion is a concern is the Fire House. Although a site can be

located some distance from the actual source of contamination to groundwater, that contamination can find a migration pathway via vapor intrusion into buildings.



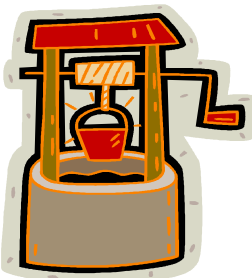
ITRC offers training on vapor intrusion on March 6th.

See page 2 for details.

PONDVIEW ESTATES STILL LACKING WATER

Two articles, both by Paula Saha, recently appeared in The Star-Ledger in regard to water issues at Pondview Estates. The January 28th article entitled "Developer seeks restraining order on water access" described the request by Pondview Estates

to the Rockaway Township council "to impose a 'scarce resource restraining order'"



that would restrict water to other proposed new projects requiring public water. The February 1st article entitled "Builder wants a system of wells" discussed a lawsuit filed by Pondview Estates against Rockaway Township to

allow them to install a system of barrier wells on the property. The proposed development has had a long history dating back to approval in 1989. Reportedly the developers have already invested "about \$50 million in the project over the years."

TCLP LEAD VERSUS TOTAL LEAD FOR WASTE DETERMINATION

The Toxicity Characteristic Leaching Procedure (TCLP) is a testing method that is used to determine whether a material exhibits the RCRA characteristic of toxicity thereby determining if the material is classified as hazardous waste. Generally it involves water "leaching" through a sample of waste or soil; the leachate generated from that process is then

analyzed for a variety of parameters. For lead, a TCLP value of over 5.0 milligrams per liter (mg/L or parts per million [ppm]) is considered to be hazardous. In contrast for in situ soil the New Jersey Department of Environmental Protection (NJDEP) uses an analysis of the total lead (not that from a leachate) to determine whether soil exceeds the soil cleanup

criteria. For lead in soil, a value over 400 ppm constitutes unacceptable contamination in residential areas. A value over 600 ppm is unacceptable in non-residential areas. ARCADIS which claims that it will remediate the site to conform to NJDEP cleanup levels proposes to use the TCLP method to measure lead in soil and to then determine whether the soil should be

removed and disposed offsite or placed under an asphalt cover at the Former DRMO Yard. The use of TCLP results in this manner would be precedent setting at Picatinny Arsenal. It's use is therefore being negotiated by the Army, the USEPA and the NJDEP.

NEW IRP SITE DISCOVERED

A new Installation Restoration Program (IRP) was recently established due to the keen eyes of NJDEP staff Jim Kealy. During a fall 2006 meeting concerning the MMRP historical record review Mr. Kealy, upon

examining a historical map, observed that the course of Green Pond Brook had changed slightly. The apparent re-routing of Green Pond Brook at some point in the past had resulted in the isolation of a small waste

disposal site. That site had been all but forgotten until the recent historical records review. Picatinny Arsenal has formulated a sampling plan that was the subject of a site inspection on February 7th. At the site

inspection a drum carcass was found. Picatinny Arsenal now proposes a similar soil sampling program to that which took place at Site 180 – drums were removed and soil samples were collected at the drum locations.

IN THE FIELD...(CONTINUED FROM P. 1)

borings along Green Pond Brook. Collection of Hydropunch groundwater samples. Installation and development of 13 temporary monitoring wells. Shut down of pump-and-treat system to allow groundwater elevation measurements (12/21/06 to 1/12/07). (December) Pneumatic slug testing of 5 temporary monitoring wells. Wetlands

delineation. (January) Site walk with DeWind One-Pass Trenching, Inc. Synoptic round of water levels. Low-flow groundwater sampling. Shutdown of pump-and-treat system (2/1/07 to 2/23/07) (February)

Area B: Installation of one injection well and four monitoring wells.

(December) Perform injection test using bromide tracer dye in the injection well. (January) Purge monitoring wells and collect visual confirmation of bromide concentration. Collect injection well samples.

continued on page 7

TCRA (CONTINUED FROM P. 1)



Munitions debris found by UXO personnel during the surface walk. The item is half of a 5-inch projectile. There is reportedly no explosive hazard associated with this piece of munitions debris.

TCRA (CONTINUED FROM P. 4)



This photo shows a view from the TCRA site looking east over the quarry.



Two personnel from NAeVA Geophysics are collecting geophysical data with an EM-61. The EM-61 is an electro magnetic instrument. The white bowl shape object mounted on top of the EM-61 is a GPS.

TCRA (CONTINUED FROM P. 5)



A person from NAEVA Geophysics is collecting geophysical data with the G-858 magnetic instrument in the Geophysical Prove-Out Area.

REACTIVE IRON ARRIVES AT PICATINNY ARSENAL

The iron for the permeable reactive barrier (PRB) at Area D arrived at Picatinny Arsenal on February 23rd, 27th and 28th. A total of 515 tons packaged in 210 pallets was shipped via railroad trucks to the site from Connelly Iron (Connelly – GPM, Inc.) of Chicago, Illinois. Connelly reports that the iron is

“designed to meet standards developed using EnviroMetal Technologies, Inc. patented technology” and that it has been used “in over 100 full-scale treatment systems.” ARCADIS supplied product information including grain size analysis, composition, and MSDS specifications.

The iron will be warehoused at Picatinny Arsenal until construction of the PRB takes place which is expected to occur in March 2007. Trenching is anticipated to require only three days - provided that weather conditions cooperate. ARCADIS, the contractor

completing the work, is attempting to complete construction quickly so that the golf course can open in the spring and operate according to the usual schedule.

DOES MOLASSES MEASURE UP?

As part of the PBC ARCADIS has assumed the responsibility for many sites where pilot testing for various groundwater treatment alternatives (carbon substrates) has already taken place. Some of the treatment alternatives have

involved sodium lactate, Regenes Hydrogen Release Compound (HRC), and zero-valent iron. ARCADIS has provided information on molasses, another alternative treatment, as requested by the RAB. Additional

information provided by ARCADIS can be examined at the PAERAB's own website: <http://www.paerab.us>

SEDIMENT OR SOIL? - GUNCOTTON LINE

Provided below are the first and second comments from the NJDEP regarding the guncotton line area. On February 8 of 2007 a site walk was completed in freezing weather with representatives of the Army, USEPA, and NJDEP to attempt to resolve an outstanding issue. Despite the bitter cold some water was found in a portion of the ditch running through the area. Two rounds of comments and responses had been exchanged between the NJDEP and the Army regarding this matter. Only the NJDEP comments are printed below to conserve space.

1st NJDEP Comment: It is not clear if the Eco Assessment has adequately addressed the historic sediment contamination along the stream / drainage ditch / open trench portion of the Guncotton Line in Area F. The intermittent waterway runs from the Area I, Site 97 through the northern end of Area F along Site 144 (Building 462), Site 209 (Building 430), and Site 139 (Building 434). Green Pond Brook is located approximately 200 feet downstream. Previous sediment sampling in this intermittent drainage ditch has detected 2,4-Dinitrotoluene at a maximum concentration of 870 mg/kg. The concentrations of lead, mercury and nitrocellulose are also significant. The text in Section 4.5.6 on page 54 of the

Eco Assessment indicates that of the eight Benthic Community Survey stations that were proposed to be sampled in Area F, only 3 were actually collected. No samples were collected from the intermittent stream/ditch. It is stated on page 39, Section 3.2.1.5, that the ditch was dry and no longer represents potential aquatic habitat and could not be assessed as such. However, it is not clear if this portion of Area F was assessed for terrestrial impacts. The text on page 39 indicates that previous sediment data was regarded as surface soil data for evaluation in Area F through wildlife exposure modeling. However, Table 5.1.6 does not include the sediment data from this area. This data is included in Table 5.1.8, but it is not clear if this data was evaluated as soil data. Is the stream completely dry all year round? NJDEP considers that the elevated concentrations of Dinitrotoluene and other contaminants detected in this drainage area pose a potential direct contact human health concern. In addition, while the ditch was dry at the time of sampling, it is not clear if it {the ditch} still carries surface water during rain events. This contaminated surface soil / sediment may continue to represent a potential risk to downgradient receptors, if surface drainage still flows

through the ditch toward Green Pond Brook. Clarification of these issues is required.

2nd NJDEP Comment: The Army states that the potential direct contact human health concerns from contaminants in the soil of the ditch were evaluated within the Phase I 2A / 3A Remedial Investigation Report for Area F. This is not correct. This data were not evaluated as soil because they were considered as sediment data in the Phase I 2A/3A RI Report. In the RI Report, the Army stated that the data would be evaluated in the Eco Assessment. Now, the Eco assessment claims that the data are soil and were evaluated in the RI. The bottom line is that there are elevated concentrations of contaminants in this area that have not been properly evaluated. NJDEP has long stated that this represents an unacceptable hot spot area that will require remediation. This same issue has come up repeatedly in the Greenpond / Bear Swamp Brook Decision Documents and now the Design document and also in various versions of the Phase I 1A/3A Report and

Eco Assessment. It is recommended that this issue be discussed and resolved at a future site visit / meeting. "

Ted Gabel, Picatinny Arsenal Environmental Projects Restoration Manager, summarized the agreements reached as a result of the site walk. The summary is provided below and is awaiting NJDEP concurrence:

1. There was an agreement on where the soils and sediment boundary behind bldg. 424 (Guncotton Pit) will be established. This line will be noted and shown in the next document on the site.
2. The Guncotton Line Feasibility Study will be the document that addresses the contamination in the ditches.
3. A revised section of the relevant eco-risk assessment that changes exposure scenario from sediment to soils will be submitted. Once approved that section will be incorporated into a revised and Final Phase III and I2a/3a Eco Report.

IN THE FIELD....(CONTINUED FROM P. 4)

Miscellaneous: Collection of groundwater samplings from monitoring wells in the 500 Area near the construction of the new pyrotechnic facility. (December)

Homeland Security Area (PICA

008 [Group 3] and PICA 013): Locate monitoring wells and determine well plug size for passive diffusion bag installation.

Tilcon (Time Critical Removal Action): Malcolm Pirnie contacts

Tilcon and begins observation of rock crushing operation. Site walkover by UXO experts. (December) Geophysical survey of area. (January)



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PICATINNY ARSENAL IS ON THE WEB

<http://www.pica.army.mil>

PICATINNY ARSENAL ENVIRONMENTAL RESTORATION ADVISORY BOARD

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Rockaway Township Health Department
Mr. Don Costanza – Town of Dover Rep.,
Dover Health Department
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Mr. William Roach – U.S. Environmental
Protection Agency
Mr. Gregory Zalaskus – New Jersey Department
of Environmental Protection

If you have any questions or require additional information on any of the subjects in this newsletter, please contact Barbara Dolce at Subsurface Solutions LLC. Subsurface Solutions LLC is the Technical Assistance for Public Participation (TAPP) contractor for the Picatinny Arsenal Environmental Restoration Advisory Board (PAERAB).

In accordance with federal regulations PAERAB meetings are open to the public and attendance by the community is encouraged. The date and time of an upcoming PAERAB meeting are advertised in local newspapers. For further information please contact Michael Glaab (PAERAB Community Co-Chair) at 973-663-9605 (michaelglaab@worldnet.att.net) or the Environmental Affairs office at Picatinny Arsenal (Ted Gabel, PAERAB Army Co-Chair at 973-724-6748).

The TAPP - Technical Assistance for Public Participation program is a DOD program that provides a mechanism for community members of Restoration Advisory Boards and Technical Review Committees to obtain technical assistance. Its purpose is to provide citizen and/or community groups with professionals to assist them in their review of environmental issues at military installations. For example, a TAPP process may involve helping the public understand environmental remediation alternatives by providing an unbiased technical analysis and recommendation.

The newsletter is intended to provide an update on newly drafted documents, field activities at Picatinny Arsenal, upcoming events related to environmental issues at the site, and discussions at technical meetings. In addition, notice of new or revised Federal or State regulations may also be included.

The PAERAB also maintains a website at <http://www.pacerab.us>.

HOT OFF THE PRESS....

Reports/Documents

- Time Critical Removal Action Work Plan Mount Hope Quarry, Internal Draft, December 18, 2006
- Proposed Plan for PICA 072 (Sites 31 and 101) - Former DRMO Yard and Former Gas Station, Draft Final, December 29, 2006
- Annual Land Use Certification for Site 20/24 (PICA 066) - Pyrotechnic Testing Range, Final, January 23, 2007
- Remedial Design Area D Groundwater, Draft Final, January 26, 2007



Documents can be reviewed by the public at the Rockaway Township Library and Morris County Library. Both sites maintain a repository of Proposed Plans and Records of Decision. Other documents and final reports are in the Administrative Record which is maintained in Building 319 at Picatinny Arsenal. Call ahead to schedule to review the record.